



# Future Combat Systems - -

***“a multi-mission system of systems concept”***

***AUSA Technology Symposium and Exhibition  
June 27, 2000***



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# DARPA Mission



## ***Technical Innovation in Support of National Security***

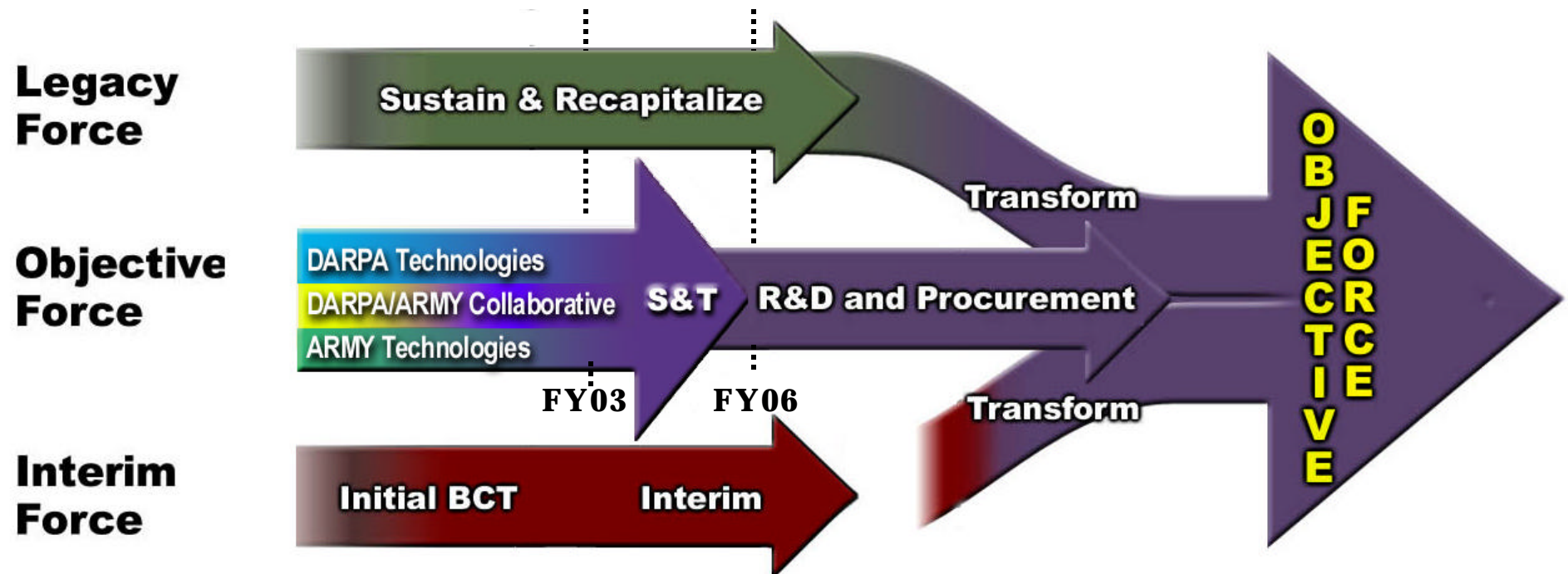
**Solve National-level problems**

**Enable Operational Dominance**

**High-Risk, High-Payoff Technology Development  
and Exploitation**



# The Army Transformation



*... Responsive, Deployable, Agile,  
Versatile, Lethal, Survivable, Sustainable.*



# What is the FCS Program?

- ***A collaborative program between DARPA and the US Army to evaluate and competitively demonstrate Future Combat Systems***
- **The FCS Program will:**
  - **Define and validate FCS design/operational concepts using modeling and simulation and surrogate exercises**
  - **Develop key enabling technologies for distributed lighter forces**
  - **Fabricate and test a multi-mission FCS Demonstrator to facilitate EMD and production**

***Simultaneously conduct a system/concept definition and design addressing the enabling technologies, allowing a critical decision in FY 03 and the creation of a systems demonstrator by FY 06***



# Why DARPA?



- **DARPA's role in DoD is to be the technical enabler for innovation for national security**
- **DARPA serves as a temporary independent agent to catalyze radical innovation for the Army**
- **FCS must go back to the Army for full development**



# The Challenge



- **What makes the DARPA/Army Collaborative Demonstration Program so challenging?**
  - **Short-term, parallel development of system-of-systems concepts and key technology efforts**
  - **New operating concepts are being developed concurrently**
  - **System concept incorporates network warfare and relies heavily on robotics**



# FCS Management



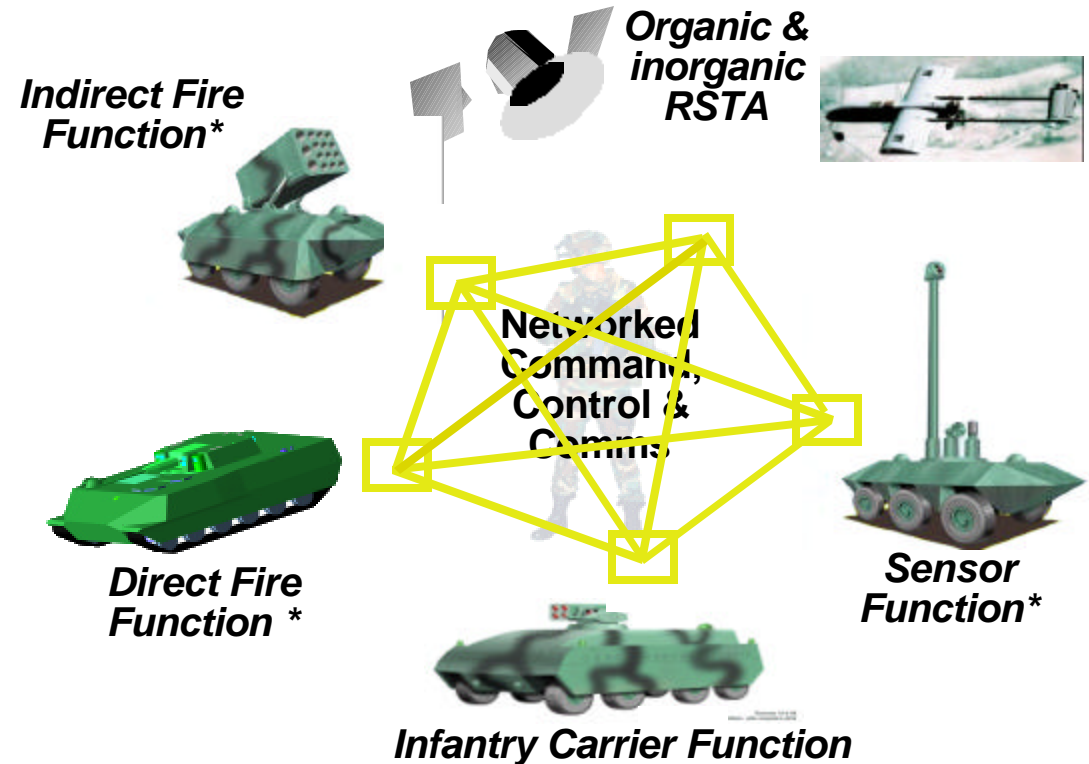
- **LTC Marion Van Fosson, USA, DARPA/TTO, is Program Manager for system-of-systems work**
- **Dr. Allen Adler, DARPA/TTO, is Chief Scientist for Enabling Technologies**
- **Individual DARPA Program Managers are managing Enabling Technologies work**
- **Total program dollars:**
  - **Through FY 03: \$614.2M**
  - **FY 04 - FY 05: \$302.0M**



# Major Technology Challenges



- **Autonomous Unmanned Ground Vehicles**
- **Maneuver BLOS**
  - **Networked Fires**
- **Organic All-Weather Targeting Vehicles & Sensors**
- **Networked Command, Control & Communications**



\* Manned or nmanaged

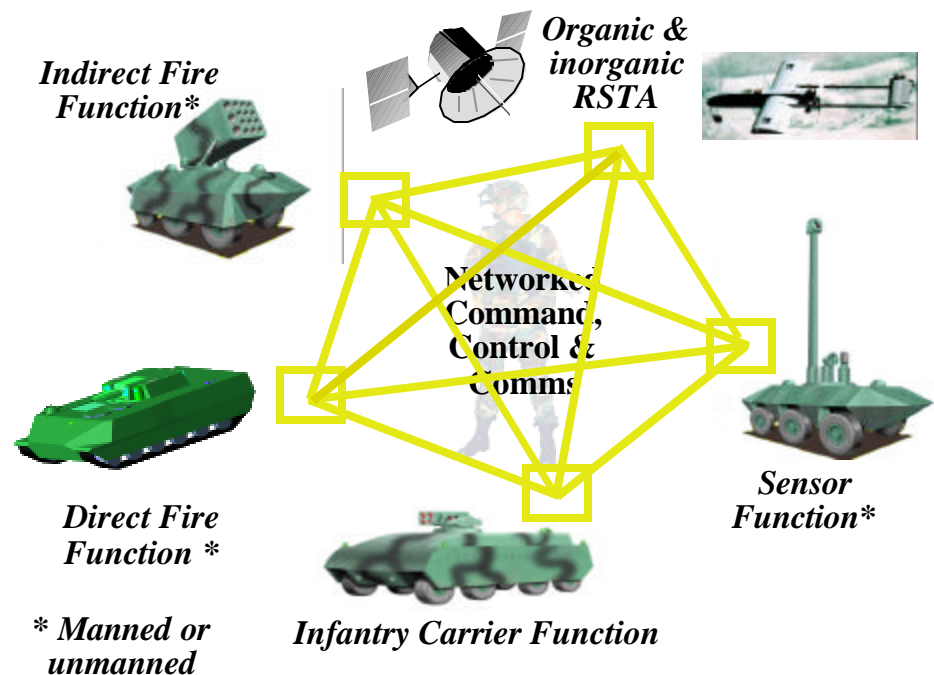




# What Makes FCS Different?



- **Network centric**
  - Know precisely, in real-time, location of all friendly and enemy forces
- **Robotics integrated into force**
  - Amplify capability of manned elements
  - Multi-functional (RSTA, armed, sustainment)
- **Increased reliance on extended range engagement**
  - Organic plus strategic and tactical support
  - Long range ISR and precision fires
- **Capable of air-mobile operations**
  - Commercial and minimum DoD strategic and tactical lift





***Army Transformation is critical for future  
National Security***

**DARPA is fully committed to support the  
Army Transformation**

**. . . by conducting critical technology risk  
reduction efforts**